

Automotive Technology 7th Edition

Chapter 32 – Crankshafts, Balance Shafts, and Bearings

Lesson Plan



CHAPTER SUMMARY:

1. Crankshafts, Crankshafts Construction, Crankshaft Oiling Holes, and Engine Crankshaft Types
2. Counterweights, Externally and Internally Balanced Engines, and Flat-Plane Vs. Cross-Plane Crankshafts
3. Engine Balance, Balance Shafts, Crankshaft Service, Engine Bearings, and Bearing Clearance
4. Camshaft Bearings



OBJECTIVES:

1. Explain the purpose of the crankshaft.
2. Describe crankshaft construction.
3. Describe crankshaft oiling holes.
4. Discuss engine crankshaft shafts.
5. Explain the purpose and function of counterweights.
6. Explain externally and internally balanced engines.
7. Compare flat-plane and cross-plane crankshafts.
8. Explain engine balance.
9. Explain the purpose of balance shafts.
10. Discuss crankshaft service.
11. Describe engine bearings.
12. Discuss the importance of bearing clearance.
13. Discuss camshaft bearings.



RESOURCES: (All resources may be found at jameshalderman.com)

1. Task Sheet: Camshaft Inspection II
2. Task Sheet: Crankshaft Inspection
3. Task Sheet: Inspect Main and Rod Bearings
4. Task Sheet: Auxiliary and Balance Shafts
5. Task Sheet: Inspect Crankshaft Vibration Damper
6. Chapter PowerPoint
7. Crossword Puzzle and Word Search
8. Videos: [\(A1\) Engine Repair Videos](#)
9. Animations: [\(A1\) Engine Repair Animations](#)



ACTIVITIES:

1. Task Sheet: Camshaft Inspection II
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ASSIGNMENTS:

1. Chapter crossword and word search puzzles from the website.
2. Complete end of chapter quiz from the textbook.
3. Complete multiple choice and short answer quizzes downloaded from the website.



CLASS DISCUSSION:

1. Review and group discussion chapter Frequently Asked Questions and Tech Tips sections.
2. Review and group discussion of the five (5) chapter Review Questions.



NOTES AND EVALUATION:
